

United States Patent [19]

Walls et al.

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tems, Man and Cybernetics, Oct. 22, 1995, pp. 3122-3127, Oct. 22, 1995.

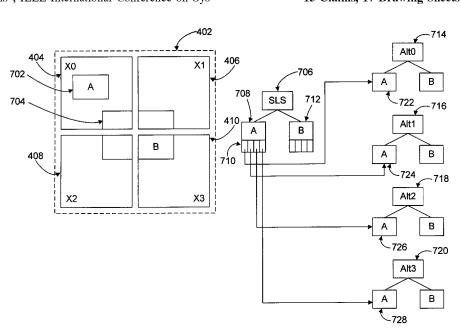
Fitzgerald et al., "Evaluating Alternative Display Sharing System Architectures", Proceedings of TRICOM '91-IEEE Conference on Communications Software, Apr. 18, 1991, pp. 145–157, Apr. 18, 1991.

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[57] **ABSTRACT**

A system and method for a computer system to recognize and initialize an arrangement of a plurality of physical monitors as a single logical screen (SLS). The invention translates a user's window operation request directed to the SLS into an SLS function. The SLS function is then translated into a plurality of device dependent functions, each of which performs the user's requested window operation on one physical monitor. The translation of the SLS function comprises an unwrapping of the SLS function by removing the SLS function and installing the plurality of device dependent functions, and the wrapping of the plurality of device dependent functions by removing the plurality of device dependent functions and installing the SLS function. The invention implements each of the unwrapping and wrapping operations in two assignment instructions. The invention further comprises the capability of generating a single simultaneous display wherein the image on one physical monitor is displayed on each physical monitor of the SLS configuration.

15 Claims, 17 Drawing Sheets



DESIGN AND METHOD FOR A LARGE, VIRTUAL WORKSPACE

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345/3, 342, 332, 145; 395/501

[56] References Cited

U.S. PATENT DOCUMENTS

5,289,574	2/1994	Sawyer
5,361,078	11/1994	Caine
5,467,102	11/1995	Kuno et al
5,523,769	6/1996	Lauer et al 345/1
5,602,983	2/1997	Naba et al 395/501
5,606,336	2/1997	Yuki
5,694,150	12/1997	Sigona et al 345/145
5,784,035	7/1998	Hagiwara et al 345/1

OTHER PUBLICATIONS

Bartram et al., "The Intelligent Zoom as Metaphor and Navigation Tool in a MultiScreen Interface for Network Control Systems", IEEE International Conference on Sys-